

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>12550900</b>	<div style="display: flex; justify-content: space-between;"> <div> <b>FOR FURTHER ACTION</b> </div> <div>           see Form PCT/ISA/220            as well as, where applicable, item 5 below.         </div> </div>	
International application No. <b>PCT/AU2004/001830</b>	International filing date ( <i>day/month/year</i> ) <b>24 December 2004</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>24 December 2003</b>
Applicant <b>BIOTA SCIENTIFIC MANAGEMENT PTY LTD et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of **5** sheets.



It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II).

3. ☐ Unity of invention is lacking (See Box No. III).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No.



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.

- b. ☒ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001830

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. <sup>7</sup> : C07D 487/14, 471/14, 498/14; A61K 31/4188, 31/4353, 31/424; A61P 31/14		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) See electronic databases		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) STN: CA substructure search based on formula I as defined in Claim 1 with reference to the preferred embodiments (pages 11 and 12)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 1322339 (AMERICAN HOME PRODUCTS CORP) 4 July 1973 formula D, pages 6 and 7	38, 39, 41-44, 50-60
X	US 3657221 (SULKOWSKI) 18 April 1972 formula III and example VI	38, 39, 41-44, 50-60
X	US 3885037 (SULKOWSKI) 20 May 1975 formula 3 and examples X-XV	38, 39, 41-44, 50-60
X	US 3966955 (SHRIVER) 29 June 1976 formula III and col 4 lines 34-38	38, 39, 41-44, 50-60
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 2 March 2005		Date of mailing of the international search report 10 MAR 2005
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  KATHERINE MOERMAN Telephone No : (02) 6283 2714

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001830

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 1229651 (AMERICAN HOME PRODUCTS CORP) 28 April 1971 formula V and examples	38, 39, 41-44, 50-60
X	US 3624101 (SULKOWSKI) 30 November 1971 formula V and examples	38, 39, 41-44, 50-60
X	CA abstract 67:43744 and RNs 13449-92-8 & Metlesics W et al., J. Org. Chem., 1967, 32(7), 2185-7	38, 41-44, 50- 58, 61
X	US 4785002 (DRABER) 15 November 1988 Compound 16	38, 41-44, 48, 50, 54, 55, 63
X	US 3311629 (SULKOWSKI) 28 March 1967 Compounds named at column 4 lines 15-16 and 31	38, 39, 41-44, 48, 50-60
X	WO 2002/066479 (BANYU PHARMACEUTICAL CO., LTD.) 29 October 2002 (compound 3147)	38
X	US 3590043 (GRAF) 29 June 1971 examples	38
X	CH 481124 (J. R. GEIGY AG) 31 December 1969 Claim 1 and examples	38
X	GB 1059175 (AMERICAN HOME PRODUCTS CORP) 15 February 1967 examples 2, 4, 6, 37, 38	38
X	US 4058529 (GRAF) 15 November 1977 examples 1 and 2	38
X	US 3379733 (HOULIHAN) 23 April 1968 example 4	38
X	CA abstract 137:337826 RN 473998-86-6	38

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001830

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA abstract 71:38862 RNs 5983-38-0, 5983-39-1	38
X	CA abstract 67:43799 RNs 5810-68-4, 5983-39-1, 5983-45-9, 13450-15-2	38

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/001830

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
GB	1322339				
US	3657221				
US	3885037	US	3763178	US	3867394
		US	3898226	US	3867401
		US	3935218	US	3900494
US	3966955				
GB	1229651	CA	920135	DE	1670041
US	3624101	GB	1322024	GB	1322025
		US	3770766	GB	1322026
US	4785002	BR	8604723	DE	3534948
US	3311629	BE	646221	JP	62081384
		DE	1445443	CH	464216
		GB	1059174	CH	465623
		NL	7211889	FR	1437386
				NL	6403794
				US	3994920
WO	02066479				
US	3590043	BE	687161	CH	455812
		CH	481123	CH	480350
		FR	1504601	DE	1695087
		NL	6613264	GB	1105219
				IL	26534
GB	1059175	BE	646221	CH	464216
		DE	1445443	CH	465623
		GB	1059174	DE	1645959
		US	3311629	NL	6403794
				NL	7211889
				US	3994920
US	4058529	BE	659530	CH	471135
		FR	1460524	DE	1545887
		NL	6501647	GB	1038735
				IL	22957
US	3379733	CH	476723	DE	1620434
		FR	1503313	ES	334167
				GB	1162835
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/AU2004/001830**